

### ABSTRACT OF THE DISCLOSURE

A method, apparatus, and article of manufacture for optimizing a query in a computer system. During compilation of the query, a GROUP BY clause with one or more GROUPING SETS, ROLLUP or CUBE operations is maintained in its original form until  
5 after query rewrite. The GROUP BY clause with the GROUPING SETS, ROLLUP or CUBE operations is then translated into a plurality of levels having one or more grouping sets. After compilation of the query, a grouping sets sequence is dynamically determined for the GROUP BY clause with the GROUPING SETS, ROLLUP or CUBE operations based on intermediate grouping sets, in order to optimize the grouping sets sequence. The execution  
10 of the grouping sets sequence is optimized by selecting a smallest grouping set from a previous one of the levels as an input to a grouping set on a next one of the levels. Finally, a UNION ALL operation is performed on the grouping sets.

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